

## **Acute Lumbago Treated with Nd:YAG Laser**

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**Background:** Acute lumbago, or acute low back pain syndrome, interests a large part of the population. Many causes are involved: posture, column defect, work, stress, trauma, weather and more, psychosomatic causes included. Many therapies are proposed, but each therapy may have side effects. Over the years, clinicians have treated this condition with different types of laser and found different results, usually positive. The aim of this study was to determine if treatment of acute lumbago with non-surgical laser therapy would result in immediate resolution of pain and muscle contracture.

**Study:** This study included 50 middle aged patients of both sexes. Participants had acute lumbago, which occurred within 1 to 7 days before treatment. 28 patients were exposed to laser treatment, whereas 22 were enrolled as a control group. Patients stopped other drugs and physical therapies, but they continued their daily activities. A Nd:YAG laser (Aerolase® LightPod Neo®) was used (1064nm, 650-microsecond pulse width, 6mm and 2mm spot size, energy of 35 J/cm<sup>2</sup> with 6mm and 105 J/cm<sup>2</sup> with 2mm, 3 passes per spot size) daily for a maximum of 12 sessions.

**Results:** Muscle contracture disappeared within the first three sessions and pain within 6 sessions. Treatment was continued until there was total resolution of the lumbago to avoid relapses. Two patients had a relapse, caused by excessive physical activity immediately after the elimination of the symptom, pain and functional limitation. They were retreated successfully.

**Conclusion:** Nd:YAG laser proved effective for the treatment of acute lumbago. Previously, we successfully treated acute lumbago with 904nm and 810nm wavelength diode lasers. The advantages of using the Nd:YAG laser over diode lasers include: shorter treatment sessions (seconds rather than minutes), fewer number of treatments, and more rapid recovery. Based on these advantages, laser therapy using the Nd:YAG laser could be proposed as the gold standard therapy for acute low back pain syndrome.